



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/810,049	03/26/2004	Graziano Marusi	043001/0024 SBPCEC/JEL	7895
7590 Steven B. Pokotilow Stroock & Stroock & Lavan LLP 180 Maiden Lane New York, NY 10038				
04/09/2008				
EXAMINER				
NGUYEN, THONG Q				
ART UNIT		PAPER NUMBER		
2872				
MAIL DATE		DELIVERY MODE		
04/09/2008		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/810,049

**Applicant(s)**

MARUSI ET AL.

**Examiner**

Thong Nguyen

**Art Unit**

2872

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 05 February 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 30-55 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 30-55 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/CDC)
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date: \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_
- Paper No(s)/Mail Date: \_\_\_\_\_

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 2/5/2008 has been entered.

### ***Response to Amendment***

2. The present Office action is made in response to the amendment filed on 2/5/2008. It is noted that in the amendment, applicant has canceled claims 1 and 3-29 and added a new set of claims, i.e., claims 30-55, into the application. Note that claim 2 was canceled in the amendment of 8/4/06.

3. A review of the device as recited in the newly-added claims has resulted that the device of the new claims is similar in scope to that of the original claims, now canceled. Thus, all pending claims 30-55 are examined in this Office action.

### ***Specification***

4. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required:

The specification has not have a proper antecedent basis for the feature related to the reflectance an amount equal to or greater than 10% of the visible spectrum in a

Art Unit: 2872

range between 410 and 800 nm as recited in claim 30, lines 56 and in claim 51, lines 4-5. Applicant should note that while the mentioned feature is readable in figures 4-6; however, the specification does not have a positive written description for the mentioned feature.

***Claim Rejections - 35 USC § 112***

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. Claim 41 is rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for a multi-layer thin film coating comprising a plurality of dielectric layers which reflects an amount of less than 15% of spectral ultraviolet radiation in a range between 315 to 400 nm wherein the layers comprises 12 layers, does not reasonably provide enablement for a multi-layer thin film coating comprising a plurality of dielectric layers which reflects an amount of less than 15% of spectral ultraviolet radiation in a range between 315 to 400 nm wherein the layers comprises 4 layers as claimed. See Note below. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make the invention commensurate in scope with these claims.

Note: In the first embodiment as described in pages 6-7 and shown in fig. 4, the thin film coating comprising a plurality of dielectric layers reflects an amount of less than 15% of spectral ultraviolet radiation in a range between 315 to 400 nm wherein the layers comprises 12 layers of TiO<sub>2</sub> and SiO<sub>2</sub> layers, and in the

second embodiment as described in pages 8-9 and shown in fig. 5, the thin film coating comprising a plurality of dielectric layers reflects an amount of less than 15% of spectral ultraviolet radiation in a range between 315 to 400 nm wherein the layers comprises 12 layers of TiO<sub>2</sub>, SiO<sub>2</sub> and ZrO<sub>2</sub> layers.

However, in the third embodiment as described in pages 9-10 and shown in fig. 6, the thin film coating comprises 4 layers; however, the reflectance of the thin film of 4 layers has an amount larger than 15% in the range of 315 to 350 nm. In the range of 350 to 800 nm, the reflectance of the thin film having four layers is less than 15% as clearly shown in fig. 6. Thus, the device as claimed in claim 41 does not have support in the specification. Applicant should note that the base claim 30 clearly claims that the reflectance is less than 15% in the range of 315 to 400 nm and greater than 10% in the range of 410 to 800 nm.

#### ***Claim Objections***

7. Claims 30 and 46 are objected to because of the following informalities.

Appropriate correction is required.

- a) In claim 30: on line 2, --an-- should be added before "outer"; and
- b) In claim 46: on line 2, "297%" should be changed to --97%--. See specification, paragraph [0031].

#### ***Claim Rejections - 35 USC § 103***

8. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

9. Claims 30-37, 41 and 50-51, as best as understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakajima (of record).

Nakajima discloses a multi-layer thin film. The thin film as described in columns 3-4 and shown in figs. 1(a) and 4 comprises the following features: a) Five layers (2-6) of high and low refractive indexes arranged alternatively on a transparent substrate (1), see fig. 1(a); b) the multi-layer thin film reflects an amount of less than 15% of spectral ultraviolet light in a range of 350 to 400 nm, and reflects an amount of greater than 10% of light in the visible range in a range of 410 to 750 nm (see fig. 4); c) Regarding to the materials of the high and low refractive index of the layers, in column 3, lines 55+ through column 4, lines 2, Nakajima discloses that the material of the high refractive index layer is  $\text{TiO}_2$ ,  $\text{TaO}_5$ ,  $\text{ZrO}_2$ ...and the material of the low refractive index layer is  $\text{MgF}_2$ ,  $\text{SiO}_2$ ,...; and d) Regarding to the number of layers used in the film, in column 3, lines 50-54, Nakajima discloses that the number of layers is composed of four to eight dielectric layers in a laminated relationship having alternatively different reflective indices. The only feature missing from the device provided by Nakajima is that he does not explicitly teach that the multilayer thin film is used with a photochromic lens as claimed.

However, it is noted that all of the important and critical features recited in the claims are directed to the multilayer thin film and not to the so-called "photochromic" of the lens referred to in the claims. It is also noted that the claims have not disclosed any specific feature related to the structure of the so-

called "photochromic lens". Applicant should further note that the transparent substrate to which the multi-layer thin film be formed as provided by Nakajima is a type of lens. Further, absent of any critical features related to the photochromic lens then the structure related to the multilayer thin film as recited in the claims is able to use with other optical element such as a windshield of an automobile, a window of a building, a protective window for a detecting system,...

Thus, while Nakajima does not explicitly teach that the multilayer thin film is used with a photochromic lens as claimed; however, it would have been obvious to one skilled in the art at the time the invention was made to utilize the multilayer thin film as provided by Nakajima on any kind of lenses including a photochromic lens for the purpose of exhibiting a visible colored appearance when observed the optical element in the form of the lens from a side opposite to the lens.

Regarding to the method as recited, while the combined product does not clearly set forth the step of creating a colored photochromic lens; however, it would have been obvious to one skilled in the art at the time the invention was made to make the multilayer thin film as provided by Nakajima by alternatively applying a plural layers made by high and low refractive materials on a photochromic lens for the purpose of obtaining a photochromic lens wherein the layers do not adversely affect the original photochromic activity of the lens.

10. Claims 38-40, 42, 48-49 and 52-55 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakajima.

The antireflection multilayered film as provided by Nakajima does not disclose that the number of layers in the film is twelve or one hundred as claimed. However, the number of layers of the film as claimed is merely that of preferred embodiment and no criticality has been disclosed. The support for that conclusion is found in the present specification in which applicant has declared that the number of layers is not critical/important as can be seen in the present specification in page 10, section [0030]. It is also noted that such a non-criticality of the number of layers is indeed claimed in the present claims. For instance, the number of layers can be four as claimed in present claim 41. Thus, absent of any criticality, it would have been obvious to one skilled in the art at the time the invention was made to modify the antireflection multilayered film provided by Nakajima by using any combination of numbers of layers as desired for the purpose of adjusting the ability of antireflection light of the film.

11. Claims 43-47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakajima.

The antireflection multilayered film as provided by Nakajima does not explicitly state that the multilayered film has an activation value greater than 25% or equal to the activation value of a photochromic lens as claimed in present claims 43-47. However, such features are considered as an inherent feature from the use of a multilayered film provided by Nakajima. The support for that conclusion is found in the structure of the multilayered film provided by Nakajima comprises a number of alternative low and high refractive indices with the materials of  $\text{SiO}_2$

and  $\text{TiO}_2$  which is identical to the structure of the film as recited in the present claims. Since a similarity and/or identity in structure will yield the same function and/or result, one skilled in the art will expect that the activation value of the film provided by Nakajima is greater than 25% of the activation value of the photochromic lens. If it is not inherent then one skilled in the art will recognize that the change in the activation value of the film with respect to that of a photochromic lens is able to obtain by just adjusting the number of layers and/or the thickness of the layers used to constitute the film. Thus, it would have been obvious to one skilled in the art at the time the invention was made to modify the antireflection multilayered film provided by Nakajima by adjusting the number of layers and/or the thickness of the layers used to constitute the antireflection multilayered film for the purpose of adjusting the activation value of the film with respect to that of the lens which lens is coated by such film.

***Response to Arguments***

10. Applicant's arguments provided in the amendment of 2/5/08, pages 6-9 have been fully considered but they are not persuasive for the following reasons.

Applicant's arguments fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references.

Regarding to the applicant's arguments that the multi-layer thin film as provided by Nakajima is disposed between a transparent substrate and a light absorbing

layer, and the multi-layer thin film of Nakajima is disposed on the rear side of the transparent substrate, see amendment, pages 7-8. The examiner offers the following opinions. Applicant is respectfully invited to review the device as claimed. The device as claimed is directed to a multi-layer thin film formed on an outer surface of a photochromic lens. There is not any specific limitation related to the structure of the so-called "photochromic" as well as "lens" in the claims. The claims recites that a multilayer thin film is formed on an outer surface of a photochromic lens; however, the claims have not recited any specific features for the so-called "outer" surface of the lens. Any lens has two outer surfaces which outer surface is understood as a surface in the contact with an outside environment which is not the lens. In this aspect, the multi-layer thin film formed on the substrate as provided by Nakajima is clearly an arrangement of a multilayer thin film on an outer surface of the transparent substrate. Regarding to the feature related to "lens, it is noted that the transparent substrate as provided by Nakajima is a type of lens. Applicant should note that a lens is understood as an optical element which allows a transmission of light.

Regarding to applicant's arguments that the multilayer thin film of Nakajima is disposed between a transparent substrate and a light absorbing layer while the invention is directed to a multilayer formed on an outer surface of a lens. The examiner offers the following opinions. First, the term "comprising" used in the claim is an open term so that the device can have more than optical components which are not directed claimed in the claim. Second, the claims have not claimed

that there is not any optical component being formed on the surface of the multilayer thin film which surface is opposite to the surface of the thin film in contact with the lens. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). Regarding to the rejection of claims 43-47 related to the activation value, applicant's arguments as provided in the amendment of 2/5/08, pages 8-9 have been fully considered but they are not persuasive. Applicant has stated that the value is for the lens, not for the multilayer. However, all features recited in the claim are directed to a multilayer thin film. The claims have not recited any specific structure of the lens, so it is unclear how a lens has such a value as claimed. Absent of feature related to the lens, it is assumed that the activation value is provided from the multilayer thin film. Applicant has also argued that a value is adjusted by an adjustment in number of layers and thickness of layers is incorrect; however, a bare statement without any written evidence is not considered as sufficient to overcome the rejection.

### ***Conclusion***

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thong Nguyen whose telephone number is (571) 272-2316. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephone B. Allen can be reached on (571) 272-2434. The fax phone

Art Unit: 2872

number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Thong Nguyen/  
Primary Examiner, Art Unit 2872